

# Enterprise Standards: Internet Domain Naming Conventions

### Definition:

An Internet domain name is an identity assigned to an Internet server (a connected device such as a computer or printer). Name resolution software lets users locate computers on the Internet by domain name instead of the corresponding numeric IP address. The DNS (the Domain Name System) is a distributed database of information about hosts (domain names) on a network that produces a pointer to Internet servers.

An organization's unique name combined with a top-level domain name provides an Internet address for the organization. The Uniform Resource Locator (URL) is the address that defines the route to a website or web pages on the Internet. The URL contains the protocol prefix, domain name, subdirectory names and perhaps a file name. A top-level domain is defined by the suffix on a domain name.

The .gov (.GOV) Internet domain suffix refers to the top-level domain operated by the federal government for the registration of U.S. government-related domain names. States have been granted the advantage of using the .gov suffix to create second level domain names such as .wv.gov.

### Rationale:

Consumers expect domain names to match organization names in the real world. The "State of West Virginia" and use of government-restricted domain names can leverage great consumer awareness and trust. An Internet address for a state government website presents an opportunity to distinguish it from the millions of other domain names on the Internet. Agencies *must* carefully consider the selection of domain names and URLs displayed to the Internet community in order to offer a clear explanation of the organizational entity and minimize confusion and intent. Domain names with minor spelling differences or conventions can lead to web sites with vastly different content than anticipated.

### Approved Standard(s) and Compliance Components:

Internet Engineering Task Force (IETF) Informational RFC 2146  
41 CFR Part 102-173

Jurisdiction of the Internet .GOV domain is available to federal, state and local governments as well as Native Sovereign Nations (NSNs). As required by the U.S. General Services Administration (GSA) for second-level domain registration, states "must register the full state name or clearly indicate the State postal code within the name."

The State Office of Technology is the authoritative source for registration of the second-, third-, and fourth-level .GOV domain for state agencies. (See <http://dns.wv.gov> for online application.)

**The only domain name reserved and approved for West Virginia State Government is the second-level domain: wv.gov.** The domain name West Virginia.gov is reserved for use only on the state home page and certain pages directly associated with it, and should not be used by state agencies.

At the third level, agencies are permitted to use agency names or program names. If multiple domain names are created, one of the names should be considered primary, used to promote the site and any others should redirect to that name.

### The following naming conventions are approved for use by state agencies:

***agency\_name.wv.gov***  
***program\_name.wv.gov***

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Examples:      Transportation.wv.gov  
                      wvdot.wv.gov  
                      wvtransportation.wv.gov  
                      taxamnesty.tax.wv.gov  
                      taxamnesty.wv.gov  
                      511.wv.gov

The agency name can be a cabinet, department, or division name, in whatever format the agency chooses - acronym, full name, natural words, etc. Agency names can include wv as a prefix, although this redundant usage is not recommended.

It is preferable to use names that combine program names with identifiable agency information, but this is not required. To use a program name in place of the agency name, the agency OOT (or CTO) must approve the name as a legitimate and known program of the agency. As with agency names, the program name can contain wv or WV, although this is again not recommended; in all cases the suffix must be .wv.gov.

When fourth-level domain naming is used for sub-units of an agency (departments of a cabinet, divisions of a department, etc.) names are to be expressed to the right of the base URL, for example transportation.wv.gov/highways. Where this is not possible, the sub-unit should appear to the left of the base URL; for example, highways.transportation.wv.gov.

Names are reserved on a first-requested basis. In most cases, OOT does not make determinations on the appropriateness of selected domain names, but reserves the right not to assign names on a case-by-case basis.

### **Discontinuance of non-standard agency domain names (any non-wv.gov domain name, such as .com, .net, .org)**

The .gov domain has proven to be extremely useful for government agencies and avoids many of the problems associated with .com domains and other non-.gov domains. Because of this, a large number of .com domain names that were used in the past by state agencies are now being allowed to lapse or expire. Expiring .com domain names are often renewed by unscrupulous third parties that abuse them in the hopes of extorting money from the original licensees. This provides a significant opportunity for public embarrassment and a resulting loss of confidence by citizens.

To avoid this type of scenario, the following process must be followed by agencies wishing to release non-.gov domains that are no longer used.

1. The agency must renew all non-wv.gov domain names (.com, .net, .org) for a **minimum of two (2) additional years** after the last date of active use.
2. Before discontinuing use of domain names that were actively used at one time, the agency should notify citizens and constituents of plans to stop using the domain. If possible, the agency should publish notification of the pending discontinuance via any distribution channels that were originally used to publicize the URL, such as documents, reports, articles, memoranda, and other publications.
3. After discontinuing use of any non-standard domain names that were actively used, the agency should place a redirecting web page at the URL address of the domain name being discontinued. The redirecting web page should request that users change their bookmarks and any links that reference the site being abandoned. The web page should automatically redirect visitors to the agency's primary wv.gov site, and should continue to redirect web traffic for at least one year.
4. After one year of redirecting traffic, the redirection should be removed and the domain should be left as a dead link for one additional year before allowing the domain registration to expire.

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5. The agency should also perform regular Internet searches, using Google's advanced search feature (or other popular search engines), to identify web sites with links to the discontinued URL. The agency should contact those sites requesting that they remove the discontinued links or change them to the URL of the alternate site.
6. Domain names that are linked to from active websites must not be allowed to expire by the licensing agency. If an agency insists on allowing a domain with active links to expire, OOT will renew the domain name to protect the State. This will result in the agency being billed for the cost of the domain renewal plus any necessary staff time spent on the renewal process.
7. The agency should initiate the termination of a domain name by submitting a properly authorized Domain Name Discontinuation Form (Form OOT-Fxxx) to the OOT Office of Enterprise Policy and Project Management.

These procedures apply to all non-standard domain names, in addition to .com, .net, and .org. This includes but is not limited to .aero, .biz, .coop, .info, .museum, .name, and .pro domain names. Failure to comply with the above procedures may result in the suspension of OOT's DNS resolution for the agency's noncompliant domains. In addition, persistent use of non-standard domain names without proper intermediate redirection notification may also result in the suspension of OOT's DNS resolution for those noncompliant domains.

### Implementation Timelines and Sunset Dates:

TBD

### Approved Product(s):

N/A (see approved standards, above)

### Justification:

Consistent naming conventions are important for ease of discovery and recognition by citizens seeking information and electronic services on the Internet. *A simple, similar, and recognizable* Internet address is important to promote a common look and feel for state government. Since 1994, West Virginia's State office of Technology has overseen the registration and maintenance of network numbers to the agencies of the state. Relative to this, the State office of Technology has also maintained information on any domain names assigned to these numbers.

### Technical and Implementation Considerations:

Because of several technical issues, marketplace trends, and the dynamic nature of the Internet, agencies must consider the citizen experience with Internet services when designating domain names. Top-level domain names (.com, .net, .org, etc.) were once restricted to certain qualified organizations. .COM names became the symbol of commercial enterprises and were included in branding. However, under existing Internet policy, anyone may now register a .com, .net, or .org domain. Use of .com, .org, or .net domains by state agencies may be tempting, however it often leads to unintended consequences not in the best interests of the public in addition to unnecessary expense to state government agencies.

### Emerging Trends and Architectural Directions:

States are endorsing the use of .gov and beginning to determine its extension to local government and other jurisdictional entities.

From a general usability perspective, continued use of the WWW prefix in a domain name is no longer necessary. It originally was used to distinguish the World Wide Web part of the domain from other Internet traffic such as FTP and Gopher. Agencies are encouraged to shorten Internet domain names and remove the WWW prefix (e.g. revenue.wv.gov, labor.wv.gov).

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### **Review Cycle:**

Annually

### **Timeline:**

TBD

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## Addendum

### Local Government Registration of .wv.gov Domain Names

Adopted TBD

#### Purpose

The purpose of this amendment is to extend the existing Enterprise Standard Internet Domain Naming Conventions, and offer recognized local government entities the opportunity to utilize a new, more intuitive, and accessible Internet address for local jurisdictions.

#### Rationale and Application to Local Governments

Increased standardization of Internet addresses (domain names) in the state, as well as across local governments, can greatly assist the citizens' ability to find state and local government services on the Internet. However, since state agencies are now required to implement this naming standard, full adoption will make it easier for all West Virginians to electronically access levels of government in the years ahead. The State of West Virginia has been granted the right to authorize and implement the use of the new Internet naming convention by state and local government units.

#### Local Government Naming Standards

Use of the new **wv.gov** convention by local governments is voluntary; however any jurisdiction requesting registration must follow the naming standard. Proposed state standards for local government naming conventions are as follows:

Cities: name of city followed by **.wv.gov** – examples:

charleston.wv.gov, parkersburg.wv.gov, morgantown.wv.gov

Counties: name of county followed by **.county.wv.gov** – examples:

boone.county.wv.gov, putnam.county.wv.gov, barbour.county.wv.gov

Public libraries and special districts are eligible, but addressing conventions are still to be determined.

### GENERAL OPERATING REQUIREMENTS AND PROCEDURES

The State Office of Technology, the state's authorized point of contact for domain naming services (DNS), serves as the technical administrator for the assigned domains for both the primary and secondary domain name servers. This service is at no additional cost to cities, counties and other government entities in the state to register at the second level **wv.gov**.

- Formal requests for inclusion of an address must be submitted on official letterhead of the entity, and signed by the highest ranking public official or officer (Mayor, County Judge-Executive, ADD director, Public Library director or similar person with the authority to bind the requesting entity).
- The request for domain name registration must include the name of the administrative contact, technical contact, IP addresses for host servers and domain name server. See <http://dns.wv.gov> for online application.
- This initiative will standardize and resolve to **wv.gov**, but each qualified entity is advised to retain current (state.wv.us) or alternate domain names (.com, .org or .net) for some specified period to assist in the transition.

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- Subdelegation of the wv.gov domain to external (non-OOT) DNS providers may be requested where local jurisdictions:
  - ◆ limit use of subdelegated wv.gov domains to the official business of the entity requesting the subdelegation;
  - ◆ provide the names/IP addresses of at least two 24/7 DNS servers which will be responsible for that subdomain; and
  - ◆ allow OOT to perform Zone Transfers of all subdelegated wv.gov zones, along with the ability to obtain useful information from their DNS servers in response to name queries (nslookup, dig). (In order to properly trouble-shoot problems, it is often necessary for OOT staff to see the information contained in the zone files of particular domains/subdomains. If the agency blocks access, this task is much more difficult.)
- OOT will discontinue resolving alternate domain names at the request of the local government jurisdiction.

**Domain Name Discontinuation Form**  
State office of Technology

Requested by: \_\_\_\_\_ Date of request: \_\_\_\_\_

Title: \_\_\_\_\_

1<sup>st</sup> Domain Name being discontinued: \_\_\_\_\_

Other Domain Names: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Cabinet: \_\_\_\_\_

Department/Division: \_\_\_\_\_

Phone number: \_\_\_\_\_

**NOTE:**

Before discontinuing a domain name, agencies must follow all guidelines and provisions found in Enterprise Standard Internet Domain Naming Conventions. By signing this form, the agency hereby acknowledges that they are fully aware of the potential problems that can occur as a result of releasing the above domain(s) and have followed all procedures described in the Enterprise Standard. The agency is also certifying that they are prepared to accept full responsibility for any problems or embarrassment that should arise as a result of releasing the above domain name(s) and making them available to the general public.

**Signatures required**\_\_\_\_\_  
Requesting Agency Information Technology Officer (OOT) \_\_\_\_\_ Date\_\_\_\_\_  
Requesting Agency's Legal Counsel \_\_\_\_\_ Date\_\_\_\_\_  
Executive Director, OOT Office of Enterprise Policy and Project Management \_\_\_\_\_ Date\_\_\_\_\_  
OOT DNS Coordinator \_\_\_\_\_ Date

Any questions regarding this form should be directed to:  
OOT Office of Enterprise Policy and Project Management